

TOWARDS LIBRARY 2.0: THE ADOPTION OF WEB 2.0 APPLICATIONS IN ACADEMIC LIBRARY WEBSITES IN MALAYSIA

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ABSTRACT

The functions of today's libraries have evolved concurrent to the advancement of computer technology in general. To keep abreast with the trends, academic libraries have also started to adopt Web 2.0 in widening their service capacity. Academic libraries currently have put a lot of efforts to construct a more interactive and lively services in assisting students to gain the most out of their learning experience. Hence, this paper examines Web 2.0 applications by academic library websites in Malaysia in their effort to promote outstanding services, particularly in supporting research activities and responses to users' comments. A number of academic libraries in Malaysia were selected for the purpose of the investigation and the results should provide some useful insights in expanding the avenues of library services.

KEYWORDS: *Academic Library; Web 2.0, Library 2.0*

Introduction

As a hub of information, traditionally, library plays a major role in educating users. However, with the development of the digital era, libraries' roles become even more challenging. Breeding (2007), who emphasizes on the need of embedding Web 2.0 applications to enrich library services, mentioned that "Web 2.0 has become a trendy marketing concept". Meanwhile Ram (2011) and others, explained that the boundaries of libraries have broadened to accept new sources and services into their daily operation. The sources of the libraries have grown from physical objects to virtual objects, from card catalogues to online public access catalogues (OPACs), and cooperative cataloguing to social cataloguing with an ability to comment, review and reuse with the application of Web 2.0 technologies.

What Web 2.0 and Library 2.0 is?

According to Harinarayana and Raju (2010), Web 2.0 includes the second generations web based services such as collaborative (Facebook, MySpace, Friendster, Tags etc) wikis, blogs, social bookmarking sites (delicouss, furl, dig etc) and photo sharing sites (flickr, photobucket etc). Meanwhile, from Birdsall (2007) point of view, Web 2.0 is a "social movement". It has attracted the attention of libraries around the world as a means for promoting and extending their services.

Library 2.0, on the other hands, is the integration of Web 2.0 features in library web-based services. According to Maness (2006), Library 2.0 is “the application of interactive, collaborative, and multi-media web-based technologies to web-based library services and collections”. In short, Library 2.0 is an offshoot of Web 2.0 technology (Birdsall, 2007).

Maness (2006) concluded that Library 2.0 is not about searching, but finding; not about accessing, but sharing. Library 2.0 recognizes that human beings do not seek and utilize information as individuals, but as communities. Table 1 shows some examples of the move from Library 1.0 to Library 2.0.

Table 1: Some examples of the move from Library 1.0 to Library 2.0

Library 1.0	Library 2.0
Email reference/ Q&A Text-based tutorials	Chat reference/ Live chat Streaming media tutorials with interactive databases
Email mailing lists, webmasters Controlled classification schemes	Blog, wikis, RSS feeds Tagging coupled with controlled schemes
OPAC Catalog of largely reliable print and electronic holding	Personalized social network interface Catalog of reliable and suspect holdings, web-pages, blogs, wikis, etc

Meanwhile, with the exponential increase in the number of Web 2.0 applications that are applicable on the Internet over the past few years, Chua and Goh (2010) developed a classification of Web 2.0 applications for libraries (Table 2). This can be used as a guide to evaluate Web 2.0 applications in academic library websites.

Table 2: A classification of Web 2.0 applications for libraries

Information work	Description	Example of Web 2.0 applications
Information acquisition	Gathering of information from sources external to libraries	Blogs, Wikis
Information dissemination	Distribution of information by libraries to users	RSS
Information organization	Representation of content to facilitate subsequent search and retrieval	Social tagging services
Information sharing	Bilateral flow of information between libraries and users	Instant messaging, Social networking services

Evaluating Web 2.0 applications in Academic Library Websites

Based on the data collected from 41 public and private university library websites considered for the study, the Web 2.0 applications were analyzed and quantified to find out how these applications have been adopted in library websites. However, this survey is only an exploratory research. To select the library websites, a list of public and private universities were compiled from Wikipedia (http://ms.wikipedia.org/wiki/Senarai_universiti_di_Malaysia) (Table 3).

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Table 3: Public and private academic library websites selected in the study
(as of March 2012)

Bil	University
	<i>Public University</i>
1.	Universiti Malaya (UM), Kuala Lumpur
2.	Universiti Sains Malaysia (USM), Pulau Pinang
3.	Universiti Putra Malaysia (UPM), Selangor
4.	Universiti Kebangsaan Malaysia (UKM), Selangor
5.	Universiti Teknologi Malaysia (UTM), Johor
6.	Universiti Teknologi MARA (UiTM), Shah Alam Selangor
7.	Universiti Islam Antarabangsa Malaysia (UIAM), Kuala Lumpur
8.	Universiti Malaysia Sabah (UMS), Sabah
9.	Universiti Malaysia Sarawak (UNIMAS), Sarawak
10.	Universiti Malaysia Terengganu (UMT), Terengganu (formerly known as KUSTEM)
11.	Universiti Malaysia Perlis (UniMAP), Perlis (formerly known as KUKUM)
12.	Universiti Tun Hussein Onn Malaysia (UTHM), Johor (formerly known as KUiTTHO)
13.	Universiti Malaysia Pahang (UMP), Pahang (formerly known as KUKTEM)
14.	Universiti Utara Malaysia (UUM), Kedah
15.	Universiti Teknikal Malaysia Melaka (UTeM), Melaka (formerly known as KUTKM)
16.	Universiti Pendidikan Sultan Idris (UPSI), Perak
17.	Universiti Sultan Zainal Abidin (UniSZA), Terengganu (formerly known as UDM)
18.	Universiti Sains Islam Malaysia (USIM), Negeri Sembilan (formerly known as KUIM)
19.	Universiti Malaysia Kelantan (UMK), Kelantan
20.	Universiti Pertahanan Nasional Malaysia (UPNM), Kuala Lumpur (formerly known as ATMA)
	<i>Private University</i>
1.	Universiti Multimedia (MMU)
2.	Universiti Tunku Abdul Rahman (UTAR)
3.	Universiti Teknologi Petronas (UTP)
4.	Universiti Perubatan Antarabangsa (IMU)
5.	Universiti Tenaga Nasional (UNITEN)
6.	Institut Perubatan, Sains dan Teknologi Asia (AIMST)
7.	Universiti Kuala Lumpur (UniKL)
8.	Universiti UCSI (UCSI University)
9.	Universiti Sains dan Teknologi Malaysia (MUST)
10.	Universiti Selangor (UNISEL)
11.	Universiti Pengurusan dan Sains (MSU)
12.	Universiti Terbuka Malaysia (OUM)
13.	Universiti Terbuka Wawasan (WOU)
14.	Universiti Tun Abdul Razak (UNIRazak)
15.	Limkokwing University of Creative Technology
16.	Universiti Antarabangsa Al-Madinah (MEDIU)
17.	Universiti Antarabangsa Albukhary
18.	Universiti Taylor's
19.	Universiti Sunway
20.	Universiti Perdana
21.	Universiti Antarabangsa INTI

Findings

As shown in Table 4, a total of 84 Web 2.0 applications have been adopted in both, public and private university academic library websites. Of the figure, 29 universities have provided link to their Facebook in the library websites as Facebook is the most popular social media used by the library to interact with their users.

Table 4: Number of websites featuring Web 2.0 applications by library type as of March 2012

Web 2.0 applications	Public University		Private University		Total
	Count	%	Count	%	
Facebook	16	55.17	13	44.83	29
Blog	9	50.00	9	50.00	18
Streaming media	5	83.33	1	16.67	6
Live Chat	4	33.33	6	66.67	10
Twitter	3	30.00	7	70.00	10
RSS	3	30.00	7	70.00	10
Wiki	1	14.29	0	85.71	1
Total	41	44.32	43	55.68	84

Meanwhile, the findings reveal that nine academic libraries from public university and nine academic libraries from private university have created their own blog. Five public university library websites used Streaming Media, whereas none from private university library websites has used this application. Live Chat has been adopted by four public university library websites, and six private university library websites. As for Twitter and RSS, they have been adopted by three public university library websites and seven private university library websites.

Analyzing between library types, as shown in Figure 1, private university library websites show slightly higher adoption rate of Twitter, RSS and Live Chat compared to public university library websites. Nevertheless, the differences are not statistically significant.

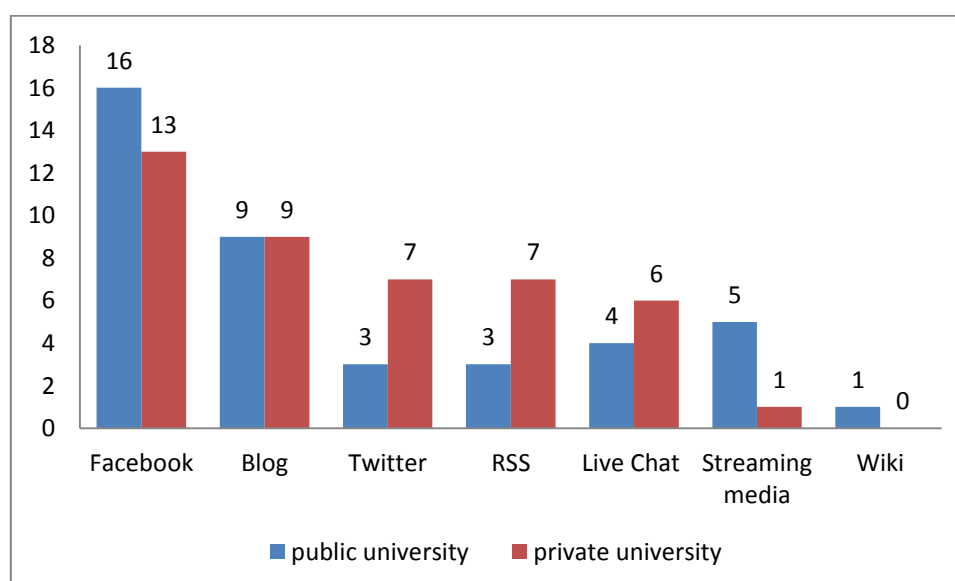


Figure 1: Number of websites featuring Web 2.0 applications by library type

Figure 2 shows that among of the most popular Web 2.0 applications for both, public and private university academic library websites is Facebook, 35 percent, followed by Blog, 21 percent. Twelve percent of all Web 2.0 applications in academic libraries website are Twitter, RSS and Live Chat. An approximate seven percent of Web 2.0 application is Streaming Media, and another one percent is Wiki.

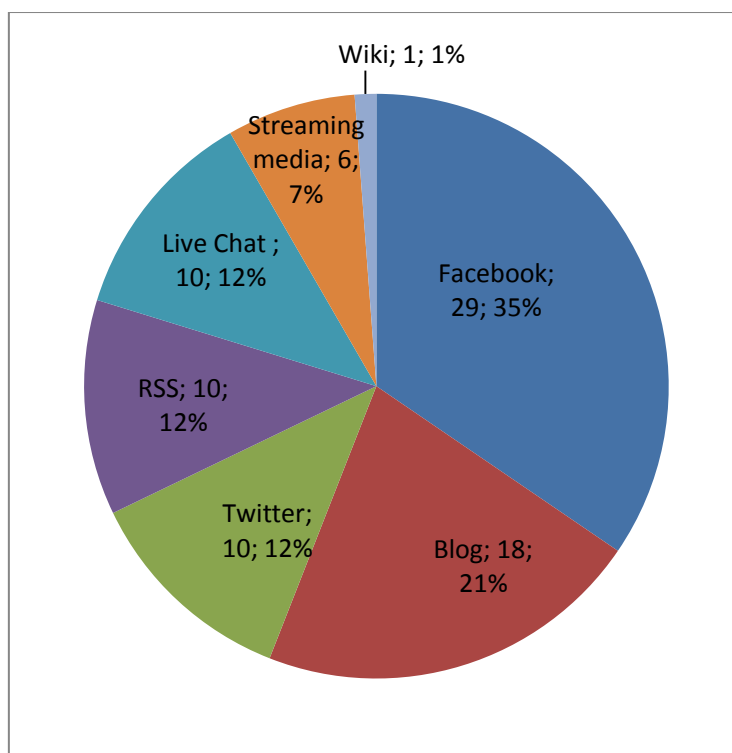


Figure 2: Number of websites featuring Web 2.0 applications

Results and discussion

This study is an exploration of the Web 2.0 applications in the 41 public and private university library websites. The scope of data collection in this study is limited to what was publicly available on the Internet.

Facebook - Facebook has been the most popular and widely used Web 2.0 applications in most of the university library websites. With a user friendly applications and interesting features, it is easy to use, even for new beginner. Most of the academic libraries use Facebook for sharing library news or events, sharing pictures as well as marketing library services. As for the Universiti Malaya Library (UML), we use Facebook for disseminating information on latest updates, opening hours, providing online reference services and also interacting with users. With this application, it will help forge relationships among users.

Blog - different library websites used blog for different purposes. The uniqueness of the blog is, it allows users to comment on the post. Therefore, the percentage of usage is quite high compared to other Web 2.0 applications. For instance, Universiti Sains Malaysia library (USM) (<http://hamzahsendutlibrary.wordpress.com/>), Universiti Utara Malaysia (UUM) library (<http://cmslib.uum.edu.my/blog/>), Universiti Sultan Zainal Abidin (UniSZA) library

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(<http://libraryunisza.blogspot.com/>), Universiti Sains Islam Malaysia (USIM) library (<http://usim-lib.blogspot.com/>) and Universiti Kuala Lumpur (UniKL) library (<http://uniklib.wordpress.com/>) has created blog to provide news and events. Universiti Teknologi MARA (UiTM) main campus library (<http://perpustakaanuitm.blogspot.com/>) has implemented blog to update their users on the opening hours, calendar of events and also to promote their services. Meanwhile, Universiti Malaysia Perlis (UniMAP) library, (<http://mylibrary.unimap.edu.my/>) is the only university library website that has created blog to introduce their liaison librarians (<http://maziahlib.wordpress.com/>). Different with Universiti Multimedia (MMU) library (<http://vlib.mmu.edu.my/portal/Index.php>), they created blog for posting book reviews, events, notifications and library updates. Universiti Teknologi Petronas (UTP) Information Resource Centre (<http://ircutp.wordpress.com/about/>) has created blog as their official website.

Twitter - Twitter is a real-time information network that connects users to the latest updates, ideas, opinions and news about what users find interesting. It allows users to re-tweet, reply, like and open the tweet. For instance, Tun Seri Lanang library (UKM) (<http://twitter.com/#!/ptsl2ukm>) has used twitter to tweet about opening hours, news and events, updating information about their collections and interacting with users. UiTM library (<http://twitter.com/#!/puitm>) has used twitter for the same purposes, but they also sharing pictures. UniSZA library (http://twitter.com/#!/UniSZA_library) has used twitter to tweet about news and events.

RSS - it was observed that most of the RSS feeds are provided in the library blog, not in the first page of the library websites themselves. The purpose of providing RSS news feed in university library websites varied from one another. For instance, Universiti Islam Antarabangsa Malaysia (UIAM) (<http://www.iium.edu.my/news-updates>) has provided RSS to disseminate news and updates, up-coming events and announcements. Universiti Malaysia Perlis (UniMAP) (<http://maziahlib.wordpress.com/>) has used RSS for sharing items published on liaison librarian blog.

Live Chat - with the live chat, users should not have come to the library. They can interact with the librarian on duty instantaneously. Most of the libraries examined used Meebo (a web-based instant messaging application) to interact with their users. Other instant messaging application that has been used by other libraries is Yahoo Messenger (YM). For instance, Universiti Multimedia (MMU) library (also known as Siti Hasmah Digital Library) (<http://vlib.mmu.edu.my/portal/Index.php>) has used YM to interact with their users.

Wiki - the present study found only one out of 41 public and private university library using the Wiki to promote its library authored resources. Universiti Teknologi Malaysia (UTM) library (also known as Perpustakaan Sultanah Zanariah) (PSZ), (http://portal.psz.utm.my/wiki/index.php/Main_Page) has Wiki-based called Wiki@PSZ, created by their librarians. The page has been accessed 10,112 times since it was created. This initiative should be modeled by other libraries since Wiki has become more popular nowadays. Bejune (2007) has discussed extensively on how library can use Wiki. With the example, she has discovered the widest variety of Wikis used in libraries.

Streaming media - YouTube has been the most popular video-sharing application that allows users to post personally developed videos/recordings. Maness (2007) studied on how streaming video is a promising way to deliver "point of need" access of information for students. For instance, Universiti Tun Hussein Onn Malaysia (UTHM) library (http://www.youtube.com/watch?v=W7T_W7Ao4u4) and Perpustakaan Tun Seri Lanang (UKM) library (<http://www.youtube.com/watch?v=22SABAFoebU>) have used YouTube to upload their corporate video as a medium to promote their library. UTHM library also broadcast the procedure on how to borrow books. PSZ (http://www.youtube.com/watch?v=lpT_OMMm0tA) has used YouTube to promote events at the library. While for some other videos, they used Motion (<http://utmotion.utm.my/utmotion/>) that have been embedded into university library websites to broadcast the video. UKM library has employed video tutorials to train users how to use library resources and access various services in their library. They have also uploaded Famous Library Quotes to share with their users.

Conclusion

The data collected from this study obtained three findings. First, mode of Web 2.0 applications for the academic library websites in public and private universities is almost the same. In particular, the order of popularity of Web 2.0 applications implemented in library websites are as follows: Facebook, Blog, Twitter, RSS, Live chat, Streaming media and Wikis. Thus, according to classification developed by Chua and Goh (Table 2), it can be concluded that, most of the libraries websites use Web 2.0 applications for "Information sharing". Second, it was observed that links to the Web 2.0 applications was commonly placed on the main page. But, there were some library websites placed the links on the other page, which was quite hidden. Third, the present study found that Web 2.0 applications have not widely used in academic library websites in Malaysia yet, except for Facebook. Most of the libraries use email or online form as the way to communicate with their users rather than live reference chat. Most of them also use .pdf format form, rather than online form to request for materials.

On the other hand, other applications such as Mobile OPAC, QR Code for Mobile Access, posting users comment on FAQs and AddThis button (for analytics and sharing purposes) created by some of the libraries also can be applied to other libraries in the near future. It is time that the library makes a difference. Libraries cannot continue to rely on Web 1.0 (static webpages) for library services on their websites. Furthermore, by identifying Web 2.0 features, appropriate applications can be used to improve overall quality of library websites. An implication would be for libraries to use Web 2.0 applications as a deliberate means to create cognitive and social connections between users and librarians (Chua & Goh, 2010).

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